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PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2


* * * * * * * * * *   Welcome to STN International   * * * * * * * * * *

 NEWS  1          Web Page for STN Seminar Schedule - N. America
 NEWS  2  AUG 15  CAOLD to be discontinued on December 31, 2008
 NEWS  3  OCT 07  EPFULL enhanced with full implementation of EPC2000
 NEWS  4  OCT 07  Multiple databases enhanced for more flexible patent
                  number searching
 NEWS  5  OCT 22  Current-awareness alert (SDI) setup and editing
                  enhanced
 NEWS  6  OCT 22  WPIDS, WPINDEX, and WPIX enhanced with Canadian PCT
                  Applications
 NEWS  7  OCT 24  CHEMLIST enhanced with intermediate list of
                  pre-registered REACH substances
 NEWS  8  NOV 21  CAS patent coverage to include exemplified prophetic
                  substances identified in English-, French-, German-,
                  and Japanese-language basic patents from 2004-present
 NEWS  9  NOV 26  MARPAT enhanced with FSORT command
 NEWS 10  NOV 26  MEDLINE year-end processing temporarily halts
                  availability of new fully-indexed citations
 NEWS 11  NOV 26  CHEMSAFE now available on STN Easy
 NEWS 12  NOV 26  Two new SET commands increase convenience of STN
                  searching
 NEWS 13  DEC 01  ChemPort single article sales feature unavailable
 NEWS 14  DEC 12  GBFULL now offers single source for full-text
                  coverage of complete UK patent families
 NEWS 15  DEC 17  Fifty-one pharmaceutical ingredients added to PS

 NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,
              AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
 NEWS LOGIN    Welcome Banner and News Items
 NEWS IPC8     For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that
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* * * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 22:38:01 ON 19 DEC 2008

=> index bioscience
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FILE 'DRUGMONOG' ACCESS NOT AUTHORIZED
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.21

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE,
       AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS,
       CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB,
       DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 22:38:20 ON 19 DEC 2008

69 FILES IN THE FILE LIST IN STNINDEX

Enter SET DETAIL ON to see search term postings or to view
search error messages that display as 0* with SET DETAIL OFF.

=> s Streptococcus or (KL0188 or KCTC#10248BP)
          0*  FILE ADISCTI

=> s Streptococcus KL0188

   0 FILES HAVE ONE OR MORE ANSWERS,   69 FILES SEARCHED IN STNINDEX

L1   QUE STREPTOCOCCUS KL0188

=> s Streptococcus sp. KL0188
          1   FILE BIOTECHABS
          1   FILE BIOTECHDS
          1   FILE CAPLUS
          1   FILE IFIPAT
  60 FILES SEARCHED...
          1   FILE USPATFULL
          1   FILE WPIDS
          1   FILE WPIFV
          1   FILE WPINDEX

   8 FILES HAVE ONE OR MORE ANSWERS,   69 FILES SEARCHED IN STNINDEX

L2   QUE STREPTOCOCCUS SP. KL0188

=> s Streptococcus sp. (KL0188 or KCTC#10248BP)
MISSING OPERATOR 'SP. (KL0188'
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s Streptococcus sp. and (KL0188 or KCTC#10248BP)
          0*  FILE ADISCTI

=> s Streptococcus sp. KCTC 10248BP
  63 FILES SEARCHED...

   0 FILES HAVE ONE OR MORE ANSWERS,   69 FILES SEARCHED IN STNINDEX

L3   QUE STREPTOCOCCUS SP. KCTC 10248BP

=> s l1

   0 FILES HAVE ONE OR MORE ANSWERS,   69 FILES SEARCHED IN STNINDEX

L4   QUE L1

=> file biotechabs biotechds caplus ifipat  uspatfull wpifv
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
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                                                          ENTRY    SESSION
FULL ESTIMATED COST                                        3.90       4.11

FILE 'BIOTECHABS' ACCESS NOT AUTHORIZED

FILE 'BIOTECHDS' ENTERED AT 22:42:06 ON 19 DEC 2008
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FILE 'IFIPAT' ENTERED AT 22:42:06 ON 19 DEC 2008
COPYRIGHT (C) 2008 IFI CLAIMS(R) Patent Services (IFI)

FILE 'USPATFULL' ENTERED AT 22:42:06 ON 19 DEC 2008
CA INDEXING COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'WPIFV' ENTERED AT 22:42:06 ON 19 DEC 2008
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=> s l2
L5            5 L2

=> dup rem l5
PROCESSING COMPLETED FOR L5
L6             3 DUP REM L5 (2 DUPLICATES REMOVED)

=> d 16 1-3

L6     ANSWER 1 OF 3  WPIFV  COPYRIGHT 2008 THOMSON REUTERS on STN
AN     2008-2343791   WPIFV
TI     New Streptococcus sp. KL0188 which does
       not express hyaluronidase and shows a non-hemolytic property, useful for
       producing high molecular weight hyaluronic acid with a high yield
IN     HAN H (KR); JANG S (KR); KIM E (KR); PARK J (KR); HAN Y (KR); LEE C
       (KR); PARK H (KR); KIM Y (KR)
INFN   HAN HEEYONG
       JANG SEUNGHONG
       KIM EULCHAE
       PARK JUNGKYUNG
       HAN YOUNGJIN
       LEE CHUNG
       PARK HEUNGSOON
       KIM YUNCHEUL
PA     (KOLO-N) KOLON LIFE SCI (KR) ; (VACC-N) VACC TECH (KR)
PI     KR 829086        B1 20080516  Korean          Equivalent
PI.B   WO 2004016771    A1
FDT    KR 2004016642    A (Previous Publ.)
AI     KR 2002-48916          20020819
PRAI   KR 2002-48916          20020819
ICM    C12P019-00; C12P019-26

L6   ANSWER 2 OF 3  IFIPAT  COPYRIGHT 2008 IFI on STN  DUPLICATE 1
AN    11178953  IFIPAT;IFIUDB;IFICDB
TI    Microorganism producing hyaluronic acid and purification method of
      hyaluronic acid
IN    Han Hee-yong; Han Young-Jin; Jang Seung-Hong; Kim Eul-Chae; Kim
      Yun-Cheul; Lee Chung; Park Heung-Soon; Park Ho-Jin; Park Jung-Kyung
PA    Unassigned Or Assigned To Individual (68000)
PPA   Kolon Industries Inc KR (Probable)
```

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PI    US 20060127987  A1  20060615
AI    US 2003-523769      20030819
      WO 2003-KR1666      20030819
                          20051005  PCT 371 date
                          20051005  PCT 102(e) date
PRAI  KR 2002-48915        20020819
      KR 2002-48916        20020819
FI    US 20060127987      20060615
DT    Utility; Patent Application - First Publication
FS    CHEMICAL
      APPLICATION
ED    Entered STN: 16 Jun 2006
      Last Updated on STN: 16 Jun 2006
CLMN  10

L6    ANSWER 3 OF 3  BIOTECHDS COPYRIGHT 2008 THOMSON REUTERS on STN DUPLICATE
      2
AN    2004-11318  BIOTECHDS
TI    New Streptococcus sp. KL0188 which does not
      express hyaluronidase and shows a non-hemolytic property, useful for
      producing high molecular weight hyaluronic acid with a high yield;
         for use in hyaluronic acid purification and cosmetic and medicinal
         industry
AU    HAN H; JANG S; KIM E; PARK J; HAN Y; LEE C; PARK H; KIM Y; PARK H
PA    KOLON IND INC; VACCTECH CORP
PI    WO 2004016771 26 Feb 2004
AI    WO 2003-KR1666 19 Aug 2003
PRAI  KR 2002-48916 19 Aug 2002; KR 2002-48915 19 Aug 2002
DT    Patent
LA    English
OS    WPI: 2004-257198 [24]


=> d hist

     (FILE 'HOME' ENTERED AT 22:38:01 ON 19 DEC 2008)

     INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE,
     AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS,
     CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB,
     DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 22:38:20 ON 19 DEC 2008
                SEA STREPTOCOCCUS OR (KL0188 OR KCTC#10248BP)
               ---------
               0*  FILE ADISCTI
                SEA STREPTOCOCCUS KL0188
               ---------
L1              QUE STREPTOCOCCUS KL0188
               ---------
                SEA STREPTOCOCCUS SP. KL0188
               ---------
               1   FILE BIOTECHABS
               1   FILE BIOTECHDS
               1   FILE CAPLUS
               1   FILE IFIPAT
               1   FILE USPATFULL
               1   FILE WPIDS
               1   FILE WPIFV
               1   FILE WPINDEX
L2              QUE STREPTOCOCCUS SP. KL0188
               ---------
                SEA STREPTOCOCCUS SP. AND (KL0188 OR KCTC#10248BP)
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                0*  FILE ADISCTI
                 SEA STREPTOCOCCUS SP. KCTC 10248BP
                ---------
L3               QUE STREPTOCOCCUS SP. KCTC 10248BP
                ---------
                 SEA L1
                ---------
L4               QUE L1
                ---------

     FILE 'BIOTECHDS, CAPLUS, IFIPAT, USPATFULL, WPIFV' ENTERED AT 22:42:06 ON
     19 DEC 2008
L5              5 S L2
L6              3 DUP REM L5 (2 DUPLICATES REMOVED)

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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                        ENTRY    SESSION
FULL ESTIMATED COST                                     18.38      22.49

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 NEWS  1          Web Page for STN Seminar Schedule - N. America
 NEWS  2  NOV 21  CAS patent coverage to include exemplified prophetic
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 NEWS  3  NOV 26  MARPAT enhanced with FSORT command
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 NEWS  5  NOV 26  Two new SET commands increase convenience of STN
                  searching
 NEWS  6  DEC 01  ChemPort single article sales feature unavailable
 NEWS  7  DEC 12  GBFULL now offers single source for full-text
                  coverage of complete UK patent families
 NEWS  8  DEC 17  Fifty-one pharmaceutical ingredients added to PS
 NEWS  9  JAN 06  The retention policy for unread STNmail messages
                  will change in 2009 for STN-Columbus and STN-Tokyo
 NEWS 10  JAN 07  WPIDS, WPINDEX, and WPIX enhanced Japanese Patent
                  Classification Data
 NEWS 11  FEB 02  Simultaneous left and right truncation (SLART) added
                  for CERAB, COMPUAB, ELCOM, and SOLIDSTATE
 NEWS 12  FEB 02  GENBANK enhanced with SET PLURALS and SET SPELLING
 NEWS 13  FEB 06  Patent sequence location (PSL) data added to USGENE
 NEWS 14  FEB 10  COMPENDEX reloaded and enhanced
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 NEWS 15  FEB 11  WTEXTILES reloaded and enhanced
 NEWS 16  FEB 19  New patent-examiner citations in 300,000 CA/CAplus
                  patent records provide insights into related prior
                  art
 NEWS 17  FEB 19  Increase the precision of your patent queries -- use
                  terms from the IPC Thesaurus, Version 2009.01
 NEWS 18  FEB 23  Several formats for image display and print options
                  discontinued in USPATFULL and USPAT2
 NEWS 19  FEB 23  MEDLINE now offers more precise author group fields
                  and 2009 MeSH terms
 NEWS 20  FEB 23  TOXCENTER updates mirror those of MEDLINE - more
                  precise author group fields and 2009 MeSH terms
 NEWS 21  FEB 23  Three million new patent records blast AEROSPACE into
                  STN patent clusters
 NEWS 22  FEB 25  USGENE enhanced with patent family and legal status
                  display data from INPADOCDB
 NEWS 23  MAR 06  INPADOCDB and INPAFAMDB enhanced with new display
                  formats
 NEWS 24  MAR 11  EPFULL backfile enhanced with additional full-text
                  applications and grants
 NEWS 25  MAR 11  ESBIOBASE reloaded and enhanced
 NEWS 26  MAR 20  CAS databases on STN enhanced with new super role
                  for nanomaterial substances
 NEWS 27  MAR 23  CA/CAplus enhanced with more than 250,000 patent
                  equivalents from China

 NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,
              AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

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FILE 'HOME' ENTERED AT 17:36:13 ON 28 MAR 2009

=> index bioscience
FILE 'DRUGMONOG' ACCESS NOT AUTHORIZED
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                      ENTRY    SESSION
FULL ESTIMATED COST                                    0.22       0.22

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE,
      AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS,
      CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB,
      DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 17:36:31 ON 28 MAR 2009

68 FILES IN THE FILE LIST IN STNINDEX

Enter SET DETAIL ON to see search term postings or to view
search error messages that display as 0* with SET DETAIL OFF.
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=> s Streptococcus and non-hemolytic
           3   FILE AGRICOLA
           6   FILE AQUASCI
           3   FILE BIOENG
         161   FILE BIOSIS
           7   FILE BIOTECHABS
           7   FILE BIOTECHDS
           4   FILE BIOTECHNO
           7   FILE CABA
          54   FILE CAPLUS
           1   FILE DDFB
           3   FILE DDFU
          43   FILE DGENE
           4   FILE DISSABS
           1   FILE DRUGB
           8   FILE DRUGU
          28   FILE EMBASE
          10   FILE ESBIOBASE
  32 FILES SEARCHED...
         125   FILE GENBANK
           8   FILE IFIPAT
           1   FILE IMSRESEARCH
          13   FILE LIFESCI
          38   FILE MEDLINE
           1   FILE OCEAN
           8   FILE PASCAL
           1   FILE PROMT
  52 FILES SEARCHED...
          24   FILE SCISEARCH
          19   FILE TOXCENTER
           4   FILE USGENE
          89   FILE USPATFULL
          10   FILE USPATOLD
          11   FILE USPAT2
           6   FILE WPIDS
           1   FILE WPIFV
           6   FILE WPINDEX

  34 FILES HAVE ONE OR MORE ANSWERS,   68 FILES SEARCHED IN STNINDEX

L1   QUE STREPTOCOCCUS AND NON-HEMOLYTIC

=> s l1 and hyaluronidase
           1   FILE BIOTECHABS
           1   FILE BIOTECHDS
           1   FILE CAPLUS
           1   FILE DISSABS
           1   FILE IFIPAT
  54 FILES SEARCHED...
           3   FILE USPATFULL
           1   FILE USPAT2
           1   FILE WPIDS
           1   FILE WPIFV
           1   FILE WPINDEX

  10 FILES HAVE ONE OR MORE ANSWERS,   68 FILES SEARCHED IN STNINDEX

L2   QUE L1 AND HYALURONIDASE

=> s l1 and no hyaluronidase
  41 FILES SEARCHED...
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          3   FILE USPATFULL
          1   FILE USPAT2

   2 FILES HAVE ONE OR MORE ANSWERS,   68 FILES SEARCHED IN STNINDEX

L3   QUE L1 AND NO HYALURONIDASE

=> file uspatfull uspat2
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     4.08       4.30

FILE 'USPATFULL' ENTERED AT 17:40:20 ON 28 MAR 2009
CA INDEXING COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 17:40:20 ON 28 MAR 2009
CA INDEXING COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)

=> s l3
L4           4 L3

=> dup rem l4
PROCESSING COMPLETED FOR L4
L5             3 DUP REM L4 (1 DUPLICATE REMOVED)

=> d l5 1-3

L5   ANSWER 1 OF 3  USPATFULL on STN
AN     2006:151551  USPATFULL
TI     Microorganism producing hyaluronic acid and purification method of
       hyaluronic acid
IN     Han, Hee-yong, Gyeonggi-do, RUSSIAN FEDERATION
       Jang, Seung-Hong, Daejeon-city, RUSSIAN FEDERATION
       Kim, Eul-Chae, Gyeonggi-do, RUSSIAN FEDERATION
       Park, Jung-Kyung, Daejeon-city, RUSSIAN FEDERATION
       Han, Young-Jin, Daejeon-city, RUSSIAN FEDERATION
       Lee, Chung, yongin-city, RUSSIAN FEDERATION
       Park, Heung-Soon, Woomyeon-dong, RUSSIAN FEDERATION
       Kim, Yun-Cheul, Gyeonggi-do, RUSSIAN FEDERATION
       Park, Ho-Jin, Gyeonggi-do, RUSSIAN FEDERATION
PI     US 20060127987      A1  20060615
AI     US 2003-523769      A1  20030819 (10)
       WO 2003-KR1666          20030819
                               20051005  PCT 371 date
PRAI   KR 2002-48915       20020819
       KR 2002-48916       20020819
DT     Utility
FS     APPLICATION
LN.CNT 519
INCL   INCLM: 435/085.000
       INCLS: 435/252.300
NCL    NCLM:  435/085.000
       NCLS:  435/252.300
IC     IPCI   C12P0019-28 [I,A]; C12P0019-00 [I,C*]; C12N0001-21 [I,A]
       IPCR   C12P0019-00 [I,C]; C12P0019-04 [I,A]; C12P0019-28 [I,A];
              C08B0037-00 [I,C*]; C08B0037-08 [I,A]; C12N0001-20 [I,C*];
              C12N0001-20 [I,A]; C12N0001-21 [I,C]; C12N0001-21 [I,A];
              C12P0019-26 [I,A]; C12R0001-46 [N,A]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5   ANSWER 2 OF 3  USPATFULL on STN
AN     2005:82247  USPATFULL
```

```
TI     Modified immunogenic pneumolysin compositions as vaccines
IN     Minetti, Conceicao, Silver Spring, MD, UNITED STATES
       Michon, Francis, Bethesda, MD, UNITED STATES
       Pullen, Jeffrey K., Columbia, MD, UNITED STATES
       Polvino-Bodnar, Mary Ellen, Annapolis, MD, UNITED STATES
       Liang, Shu-Mei, Taipei, TAIWAN, PROVINCE OF CHINA
       Tai, Joseph Y., Collegeville, PA, UNITED STATES
PI     US 20050070695      A1  20050331
AI     US 2004-785673      A1  20040223 (10)
RLI    Division of Ser. No. US 1998-120044, filed on 21 Jul 1998, GRANTED, Pat.
       No. US 6764686
PRAI   US 1997-53306P      19970721 (60)
       US 1998-73456P      19980202 (60)
DT     Utility
FS     APPLICATION
LN.CNT 2289
INCL   INCLM: 530/395.000
NCL    NCLM:  530/395.000
IC     [7]
       ICM    C07K014-47
       IPCI   C07K0014-47 [ICM,7]; C07K0014-435 [ICM,7,C*]
       IPCR   C07K0014-195 [I,C*]; C07K0014-315 [I,A]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5   ANSWER 3 OF 3  USPATFULL on STN                    DUPLICATE 1
AN     2001:133883  USPATFULL
TI     MODIFIED IMMUNOGENIC PNEUMOLYSIN COMPOSITIONS AS VACCINES
IN     MINETTI, CONCEICAO, SILVER SPRING, MD, United States
       MICHON, FRANCIS, BETHESDA, MD, United States
       PULLEN, JEFFREY K., COLUMBIA, MD, United States
       POLVINO-BODNAR, MARYELLEN, ANNAPOLIS, MD, United States
       LIANG, SHU-MEI, NANKANG, Taiwan, Province of China
       TAI, JOSEPH Y., COLLEGEVILLE, PA, United States
PA     NORTH AMERICAN VACCINE, INC. (U.S. corporation)
PI     US 20010014332      A1  20010816
       US 6764686          B2  20040720
AI     US 1998-120044      A1  19980721 (9)
PRAI   US 1997-53306P      19970721 (60)
       US 1998-73456P      19980202 (60)
DT     Utility
FS     APPLICATION
LN.CNT 2149
INCL   INCLM: 424/190.100
       INCLS: 424/192.100
NCL    NCLM:  424/236.100; 424/190.100
       NCLS:  424/184.100; 424/185.100; 424/190.100; 424/194.100; 424/197.110;
              424/203.100; 424/234.100; 424/244.100; 424/831.000; 530/350.000;
              530/825.000; 424/192.100
IC     [7]
       ICM    A61K039-02
       ICS    A61K039-00
       IPCI   A61K0039-02 [ICM,7]; A61K0039-00 [ICS,7]
       IPCI-2 A61K0039-02 [ICM,7]; A61K0039-09 [ICS,7]; A61K0039-385 [ICS,7];
              A61K0039-116 [ICS,7]; A61K0039-38 [ICS,7]
       IPCR   C07K0014-195 [I,C*]; C07K0014-315 [I,A]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.


=> d 15 1 kwic

L5   ANSWER 1 OF 3  USPATFULL on STN
AB     The present invention relates to a hyaluronic acid producing strain
```

Streptococcus sp. KL0188 and a method for purifying hyaluronic acid, more particularly to a Streptococcus sp. KL0188 that does not express hyaluronidase and is non-hemolytic, and a method for purifying hyaluronic acid using an aromatic adsorption resin and an active carbon.

SUMM . . . present invention relates to a hyaluronic acid producing microorganism strain and a method for purifying hyaluronic acid, and particularly to Streptococcus sp. KL0188 and a method for purifying hyaluronic acid using an aromatic adsorption resin and an active carbon.

SUMM Microorganisms used for the production of hyaluronic acid include Streptococcus pyogenes, Streptococcus faecalis, Streptococcus dysgalactiae, Streptococcus zooepidemicus, Streptococcus equi, Streptococcus equisimilis, etc. According to Bergy's manual, these pertain to Lancefield's serological group A or C. Such microorganisms are hemolytic Streptococcus, and they are reported to have beta-hemolytic functions.

SUMM Since hyaluronic acids that are produced using Streptococcus sp. microorganisms (Japanese Patent Laid-Open Publication No. 58-566922, U.S. Patent Laid-Open Publication No. 60-500997, Korean Patent Registration Publication No. 10-250573,. . .

SUMM U.S. Pat. No. 4,157,296 discloses a method for purifying 5 hyaluronic acid by treating a culture solution of Streptococcus pyogenes with trichloro acetic acid to remove strains, and then precipitating it using an organic solvent. However, since the precipitation. . .

SUMM . . . Pat. No. 4,782,046 describes a purification process of introducing 0.01% anionic surfactant of lauryl sulfate into a culture solution of Streptococcus equi to separate hyaluronic acid attached to cell walls, and then introducing a non-ionic surfactant of hexadecyltrimethyl ammonium bromide to. . .

SUMM U.S. Pat. No. 4,784,990 describes a purification process of adding ethanol to a culture solution of Streptococcus zooepidemicus to separate hyaluronic acid from microorganisms, and then precipitating it with cetyl pyridinium chloride.

SUMM It is another object of the present invention to provide a hyaluronic acid producing microorganism strain that does not express hyaluronidase and is not hemolytic.

SUMM . . . is another object of the present invention to provide a high molecular weight hyaluronic acid that is produced from a non-hemolytic microorganism strain and purified.

SUMM In order to achieve these objects, the present invention provides Streptococcus sp. KL0188 (KCTC1024BP), which does not express hyaluronidase and is non-hemolytic.

DETD According to the present invention, Streptococcus sp. KL0188 that is prepared by causing mutation in Streptococcus zooepidemicus is provided. The Streptococcus sp. KL0188 has been deposited with the Korean Collection for Type Culture, on May 10, 2002, under deposit No. KCTC10248BP. The Streptococcus sp. KL0188 is a non-hemolytic strain, and it can produce hyaluronic acid with a high yield because it does not have hyaluronidase activity.

DETD The Streptococcus sp. KL0188 can be cultured on a culture medium containing trace elements such as a carbon source, a nitrogen source,. . . .

DETD The example of the culture medium for Streptococcus sp. KL0188 that is used in the present invention comprises: 20 to 80 g/L of glucose, 5 g/L of yeast. . .

DETD The Streptococcus sp. KL0188 can be cultured at 30 to 37° C. under aerobic conditions. The pH of the culture solution is. . .

DETD Hyaluronic acid produced from Streptococcus sp. KL0188 can be

separated and purified by common methods (J. Soc. Cosmet. Japan. 22, 35-42 (1988)) or by the purification method of the present invention. The Streptococcus sp. KL0188 produces approximately 6.0 to 7.5 g/L of hyaluronic acid, with a high average molecular weight of 4,000,000 Da. . .

DETD Therefore, according to the present invention, the Streptococcus sp. KL0188 can produce hyaluronic acid with a low cost and high yield, and hyaluronic acid can also be purified. . .

DETD As the hyaluronic acid producing strain, any strain that produces hyaluronic acid as a metabolite can be used, and representatively, Streptococcus sp. microorganisms can be used. The Streptococcus sp. microorganisms include Streptococcus pyogenes, Streptococcus faecalis, Streptococcus dysgalactiae, Streptococcus zooepidemicus, Streptococcus equi, Streptococcus equisimilis, and Streptococcus sp. KL0188 (KCTC10248BP). The hyaluronic acid producing strains can be cultured by a common culture method to prepare a culture. . .

DETD Mutation was caused on Streptococcus zooepidemicus to select mutant strains that have non-hemolytic properties and do not have hyaluronidase activities.

DETD Streptococcus zooepidemicus (KCTC 3318) was inoculated on 50 ml of Baco Todd Hewitt Broth from DIFCO Company and cultured at 37°. . .

DETD On the selected non-hemolytic mutant strains, mutation was caused by the same method as mentioned above to select strains that do not have hyaluronidase activity. The non-hemolytic mutant strains were coated on a Todd Hewitt Agar Broth containing 400 μg of hyaluronic acid and 1% albumin fraction. . .

DETD . . . Saito, N. & Nei, M. (1987) Mol Biol vol 4, 406-425). As a result, the selected strains were identified as Streptococcus sp. hence they were named Streptococcus sp. KL0188. The Streptococcus sp. KL0188 was deposited with the Korean Collection for Type Culture on May 10, 2002, under deposition No. KCTC 10248BP.

DETD Streptococcus sp. KL0188 was cultured to measure hyaluronic acid production efficiency and the molecular weight of produced hyaluronic acid.

DETD Examination of Hyaluronic Acid Productivity of Streptococcus zooepidemicus

DETD Streptococcus zooepidemicus (KCTC3318) was cultured by the same method as in Example 2, and hyaluronic acid productivity and molecular weight were. . .

DETD It was confirmed that the Streptococcus sp. KL0188 of the present invention has excellent hyaluronic acid productivity and the molecular weight of the produced hyaluronic acid was high, compared to Streptococcus zooepidemicus.

DETD The Streptococcus sp. KL0188 of the present invention is a non-hemolytic strain, and produces hyaluronic acid with a high molecular weight and a high yield. Therefore, hyaluronic acid produced from the

DETD Streptococcus sp. KL0188 can be used for cosmetics or medicines.

DETD Streptococcus sp. KL0188 (KCTC10248BP) was inoculated on 100 ml of Todd Hewitt Broth and cultured at 35° C. until an algebraic. . .

DETD Hyaluronic acid and its salt were purified by the same method as in Example 3, except that Streptococcus zooepidemicus (KCTC3318) was used as a hyaluronic acid producing strain.

CLM What is claimed is:

1. Streptococcus sp. KL0188 (KCTC), which is a hyaluronic acid

producing microorganism strain that does not express hyaluronidase and that shows a non-hemolytic property.

CLM What is claimed is:
2. A method for purifying hyaluronic acid, comprising the steps of treating a culture solution of the Streptococcus sp. KL0188 (KCTC10248BP) of claim 1 with an aromatic adsorption resin, treating it with an active carbon, and precipitating it. . .
CLM What is claimed is:
. . . purifying hyaluronic acid and a salt thereof according to claim 6, wherein the hyaluronic acid producing microorganism strain is a Streptococcus sp. strain.

=> d 2 kwic

L5 ANSWER 2 OF 3 USPATFULL on STN
AB . . . immunogenic compositions useful as pharmaceutical compositions including vaccines in which non-toxic, modified pneumolysin is used to stimulate protective immunity against Streptococcus pneumoniae. The vaccines may be compositions in which the modified pneumolysin is conjugated to bacterial polysaccharides or may be carried. . . addition, the invention also provides a method of using the non-toxic, modified pneumolysin toxoid in order to stimulate antibodies against Streptococcus pneumoniae in a treated individual which are then isolated and transferred to a second individual, thereby conferring protection against Streptococcus pneumoniae in the second individual.
SUMM . . . forms of pneumolysin and their use in producing compositions for the immunization of mammals against infections caused by bacteria including Streptococcus pneumoniae.
SUMM [0002] Streptococcus pneumoniae is the major cause of bacterial pneumonia, bacteremia, meningitis, and otitis media (Baltimore et al. in Bacterial infections of. . .
SUMM [0003] Pneumolysin (PLY), a sulfydryl-activated cytolytic toxin, is produced by all types of Streptococcus pneumoniae (Kanclerski et al. J Clin Microbiol 1987, 25, 222-225) and is considered a major virulence factor in pneumococcal infection. . .
SUMM . . . the virulence of this organism include pneumolysin, autolysin, neuraminidase, pneumococcal surface polypeptide A (PspA), the 37 kDa polypeptide, adhesion molecules, hyaluronidase, and an IgA1 protease.
SUMM . . . this invention to provide vaccine preparations comprising a modified pneumolysin polypeptide that can elicit antibodies and induce protective immunity against Streptococcus pneumoniae when delivered to a susceptible mammal. Such vaccines may be based on the pneumolysoid itself, or conjugates that comprise. . .
DETD . . . specific bacteria, this invention can be used to provide immunization against meningococcus, pneumococcus, haemophilus influenzae type b and Group B streptococcus as well as other bacteria.
DETD [0075] The modified pneumolysin polypeptides of this invention are polypeptides that are non-hemolytic or substantially non-hemolytic and still maintain at least one epitope that binds to antibody directed against the native polypeptide. Because such hemolytic activity. . .
DETD . . . host cell may be prokaryotic or eukaryotic. DNA for native wild-type pneumolysin may be obtained from natural sources, such as Streptococcus pneumoniae, or alternatively synthesized. The wild-type DNA may then be used as the starting material for modification, as described above,. . .

DETD . . . bacteria. Such bacteria including for example: Haemophilus influenzae type b; meningococcus group A, B, or C; group B or A streptococcus of various serotypes including group B types Ia, Ib, II, III, V, and VIII; as well as the various serotypes. . .

DETD [0133] Bacterial Strains and Plasmids. Streptococcus pneumoniae serotype 14 (ATCC, Rockville, Md.) was used in this study for isolation of genomic DNA. E. coli strain DH5α. . .

DETD Cloning of the Pneumolysin Gene for Streptococcus pneumoniae serotype 14.

DETD [0136] Genomic DNA was isolated from approximately 0.5 g Streptococcus pneumoniae serotype 14 using the method described above. This DNA served as the template for two pneumolysin-specific oligonucleotides in a. . .

DETD [0177] Six to 8 weeks old female outbred CD-1 mice (Charles River, Raleigh) were immunized with monovalent or tetravalent vaccines. Streptococcus pneumoniae polysaccharides types 6B, 14, 19, and 23 were conjugated to tetanus toxoid or pneumolysin mutant (0.5 μg PS/0.2 ml. . .

=> d l5 3 kwic

L5 ANSWER 3 OF 3 USPATFULL on STN DUPLICATE 1

AB . . . immunogenic compositions useful as pharmaceutical compositions including vaccines in which non-toxic, modified pneumolysin is used to stimulate protective immunity against Streptococcus pneumoniae. The vaccines may be compositions in which the modified pneumolysin is conjugated to bacterial polysaccharides or may be carried. . . addition, the invention also provides a method of using the non-toxic, modified pneumolysin toxoid in order to stimulate antibodies against Streptococcus pneumoniae in a treated individual which are then isolated and transferred to a second individual, thereby conferring protection against Streptococcus pneumoniae in the second individual.

SUMM . . . forms of pneumolysin and their use in producing compositions for the immunization of mammals against infections caused by bacteria including Streptococcus pneumoniae.

SUMM [0002] Streptococcus pneumoniae is the major cause of bacterial pneumonia, bacteremia, meningitis, and otitis media (Baltimore et al. in Bacterial infections of. . .

SUMM [0003] Pneumolysin (PLY), a sulfydryl-activated cytolytic toxin, is produced by all types of Streptococcus pneumoniae (Kanclerski et al. J Clin Microbiol 1987, 25, 222-225) and is considered a major virulence factor in pneumococcal infection. . .

SUMM . . . the virulence of this organism include pneumolysin, autolysin, neuraminidase, pneumococcal surface polypeptide A (PspA), the 37 kDa polypeptide, adhesion molecules, hyaluronidase, and an IgA1 protease.

SUMM . . . this invention to provide vaccine preparations comprising a modified pneumolysin polypeptide that can elicit antibodies and induce protective immunity against Streptococcus pneumoniae when delivered to a susceptible mammal. Such vaccines may be based on the pneumolysoid itself, or conjugates that comprise. . .

DETD . . . specific bacteria, this invention can be used to provide immunization against meningococcus, pneumococcus, haemophilus influenzae type b and Group B streptococcus as well as other bacteria.

DETD [0074] The modified pneumolysin polypeptides of this invention are polypeptides that are non-hemolytic or substantially non-hemolytic and still maintain at least one epitope that binds to antibody directed against the native polypeptide. Because such hemolytic activity. . .

DETD . . . host cell may be prokaryotic or eukaryotic. DNA for native

wild-type pneumolysin may be obtained from natural sources, such as Streptococcus pneumoniae, or alternatively synthesized. The wild-type DNA may then be used as the starting material for modification, as described above,. . .

DETD . . . bacteria. Such bacteria including for example: Haemophilus influenzae type b; meningococcus group A, B, or C; group B or A streptococcus of various serotypes including group B types Ia, Ib, II, III, V, and VIII; as well as the various serotypes. . .

DETD [0128] Bacterial Strains and Plasmids. Streptococcus pneumoniae serotype 14 (ATCC, Rockville, Md.) was used in this study for isolation of genomic DNA. E. coli strain DH5α. . .

DETD Cloning of the Pneumolysin Gene for Streptococcus pneumoniae Serotype 14

DETD [0131] Genomic DNA was isolated from approximately 0.5 g Streptococcus pneumoniae serotype 14 using the method described above. This DNA served as the template for two pneumolysin-specific oligonucleotides in a. . .

DETD [0167] Six to 8 weeks old female outbred CD-1 mice (Charles River, Raleigh) were immunized with monovalent or tetravalent vaccines. Streptococcus pneumoniae polysaccharides types 6B, 14, 19, and 23 were conjugated to tetanus toxoid or pneumolysin mutant (0.5 μg PS/0.2 ml. . .

CLM What is claimed is:

. . . bacteria selected from the group consisting of a Haemophilus influenzae type b; meningococcal group A, B or C; group B streptococcus types Ia, Ib, II, III, V or VIII and pneumococcal.

CLM What is claimed is:

. . . a bacteria selected from the group consisting of Haemophilus influenzae type b; meningococcus group A, B, or C; group A streptococcus or group B streptococcus serotypes Ia, Ib, II, III, V, or VIII; or one or more of serotypes 1-23 of S. pneumoniae.

=> d hist

(FILE 'HOME' ENTERED AT 17:36:13 ON 28 MAR 2009)

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE, AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS, CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB, DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 17:36:31 ON 28 MAR 2009

SEA STREPTOCOCCUS AND NON-HEMOLYTIC

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=> logoff
ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF
LOGOFF? (Y)/N/HOLD:y
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                      ENTRY     SESSION
FULL ESTIMATED COST                                    9.42       13.72

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